



## DEPUTY CHIEF ARCHITECTS OFFICE, Nagpur Division

GRIHA EB



4 STAR



The following strategies were adopted by the project team to reduce the impact of the existing building on the environment:

### Site Parameters:

- Amenities such as bus stop, bank, restaurant etc. were available within 500 meters of walking distance from the main entrance of the project.
- Preferred parking were provided for electric vehicles.
- Strategies were implemented over 967.67 sqm. of site area to reduce the Urban Heat Island Effect.

### Energy:

- Replacement of old electrical equipment and appliances with BEE star rated ones has reduced the annual energy consumption from 6,015 kWh/year to 3,695 kWh/year.
- Solar photovoltaic system of 5 kWp was proposed to generate 7,543 kWh of renewable energy.

### Water Efficiency:

- Building water consumption was reduced from 107.96 kL/year to 74.73 kL/year.

### Human Health and Comfort:

- Indoor comfort conditions measured in summer months; Dry bulb temperature= 26 - 27°C, Relative humidity= 52% – 55%, Daylight levels= 100 - 170 lux, Artificial lighting levels= 220 - 239 lux were compliant with benchmarks of the Indian Model for Adaptive comfort, SP 41 and NBC 2005.

Location	: Nagpur, Maharashtra
Site Area	: 1,384.59 sqm.
Built up Area	: 973 sqm.
Typology	: Commercial
Rating Category	: GRIHA for Existing Buildings (EB)
Version	: 1
Date of Award	: 31st May, 2019
Client	: Government of Maharashtra
Integrated Design Team	: Public Works Department (PWD), Maharashtra
Green Building Consultant	: Energetic Consulting Pvt. Ltd.

Total energy offset  
by renewables  
= **204.14%**

Total reduction in  
building water demand  
= **30.78%**

### TOTAL CARBON OFFSET BY THE PROJECT:

By planting native saplings & preserving existing trees: **0.13 ton/year**

By conservation of conventional energy: **10.74 ton/year**